

**REMARKS**

After entry of the present Amendment, claims 1-6, 8-15, 17, 18, and 20-23 are pending in the subject application. Claims 1-4 are currently amended to recite that the water-soluble polymer is present in component (B<sup>1</sup>) or component (B<sup>2</sup>), respectively, in an amount of from 0.01 to 5 % by weight. Support for this claim amendment can be found at least in paragraphs [0022] and [0039] of the subject application as published, i.e., U.S. Publ. Pat. Appln. No. 2008/0021125. Claims 1 and 4 are currently amended in accordance with the Examiner's recommendation relative to the recited basis for the content of the water soluble polymer and water. Support for this claim amendment can be found at least in paragraph [0022] of the subject application as published. Claims 7, 16 and 19 are cancelled in the present Amendment in view of the Applicants' amendment of claims 1-4. Claims 22 and 23 are new and recite that component (a-4) is added in an amount of 1 to 60 parts by weight per 100 parts by weight of component (a-1). Support for new claims 22 and 23 can be found at least in paragraph [0020] of the subject application as published. As such, no new matter is introduced via the present Amendment. No claims are withdrawn.

As a preliminary matter, the Applicants respectfully note that the instant Office Action is the fourth consecutive Non-Final Office Action issued by the USPTO. Despite the instant Office Action being the fourth consecutive Non-Final Office Action, the instant Office Action is the first time the Examiner's claim objections to claims 1 and 4 and the Examiner's rejection of claims under 35 U.S.C. § 112 have been raised, and these objections/rejections are not in response to any amendment by the Applicant, but rather relate to subject matter included in the claims as originally filed. Additionally, in each consecutive Office Action, the Examiner has

issued new rejections and, presumably, has conducted a new search in response to each of the Applicants' Amendments/Responses. The Applicants respectfully note that such piecemeal examination "should be avoided as much as possible." MPEP § 707.07(g).

Claims 1 and 4 are objected to by the Examiner because the Examiner asserts that these claims do not indicate the basis for the recitation that component (B<sup>1</sup>) is contained in a proportion ranging from 50 to 250 parts by weight. The Applicants note that these claims recite, for example, that component (b-1) and water are contained in a proportion ranging from 10 to 250 parts by weight and component (C) is contained in a proportion ranging from 0.1 to 10 parts by weight per 100 parts by weight of the total of (a-1) to (a-4) in component (A). As such, the Applicants note that recited basis of "100 parts by weight of the total of (a-1) to (a-4) in component (A)" does not relate to and modify component (C) only. Rather, this recited basis relates to component (b-1) and water in addition to component (C). Accordingly, the Applicants submit that one of skill in the art would readily appreciate that the basis for the recitation of the amount of the water soluble polymer and water is 100 parts by weight of the total of (a-1) to (a-4) in component (A). Notwithstanding, while the Applicants make no concession as to the propriety of the Examiner's objection of these claims, claims 1 and 4 are currently amended in accordance with the Examiner's suggestion to recite this weight basis to expedite prosecution and allowance of the subject application.

Claims 4, 14-16 and 20-21 stand rejected under 35 U.S.C. § 112, first paragraph, for lack of enablement. In particular, the Examiner contends that the specification of the subject application does not enable the range of the aqueous solution of the water-soluble polymer of instant claim 4 being from 10 to 250 parts by weight. The Applicants respectfully disagree with

the Examiner and traverse the Examiner's rejection under § 112. In particular, as the Examiner is aware, the standard of enablement under § 112 is whether one skilled in the art can make and use the claimed invention without undue experimentation. Claim 4 of the subject application, as originally filed, recited the range of the aqueous solution of the water-soluble polymer as being from 10 to 250 parts by weight. Clearly, one of skill in the art would be able to make and use the claimed invention in view of the express disclosure of the range in the claims as originally filed, which are part of the specification. Said differently, there is no undue burden or experimentation required to practice an expressly claimed and disclosed range. Perhaps most importantly, the Applicants note that "when the subject matter is not in the specification portion of the application as filed but is in the claims, the limitation in and of itself may enable one skilled in the art to make and use the claim containing the limitation." MPEP § 2164. As such, the Examiner's rejection under § 112 is respectfully traversed.

Claims 1-21 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Publ. Pat. Appln. No. 2004/0152825 to Yamamoto et al. ("Yamamoto"). In view of the Applicants' amendment of the independent claims of the subject application, as well as the reasons set forth below, the Examiner's rejection is respectfully overcome.

In particular, with respect to the rejection of claims 1-21, the Examiner contends that Yamamoto discloses an emulsion comprising: (A) 100 parts by weight of an organopolysiloxane having at least two alkenyl groups and a viscosity of from 0.05 to 500 Pa·s; 0.1 to 30 parts by weight of a cross-linking agent; (C) 50 to 1,000 parts by weight of a polyvinyl alcohol homopolymer or copolymer; (D) 0 to 5 parts by weight of a catalyst; (E) 100 to 100,000 parts by weight of water; and (F) 0.1 to 100 parts by weight of a surfactant. The Examiner also contends

that Yamamoto discloses that silica may be added to the composition for the beneficial impact it has on the mechanical properties of the composition.

As a preliminary matter relative to the Examiner's rejection over Yamamoto, the Applicants respectfully note that the claims recite that the reinforcing filler is included in the liquid diorganopolysiloxane having at least two alkenyl groups per molecule and a viscosity at 25 °C not less than 100 mPa·s and not more than 100,000 mPa·s. While the Applicants appreciate that Yamamoto generally discloses that its compositions may include silica, Yamamoto fails to disclose, teach, or even suggest a reinforcing filler present in a liquid diorganopolysiloxane having at least two alkenyl groups per molecule and a viscosity at 25 °C not less than 100 mPa·s and not more than 100,000 mPa·s, as claimed in the subject application.

As expressly admitted by the Examiner, Yamamoto requires from 50 to 1,000 parts by weight of a polyvinyl alcohol homopolymer or copolymer (PVA), which the Examiner correlates to the instantly claimed water-soluble polymer. In contrast, the independent claims of the subject application have been amended to recite that the water-soluble polymer is present in component (B<sup>1</sup>) or component (B<sup>2</sup>), respectively, in an amount of from 0.01 to 5 % by weight. To address this claim element, which was previously recited in dependent claims 7, 16 and 19, the Examiner cites paragraph [0069] of Yamamoto, and contends that this portion of Yamamoto discloses that the PVA is an aqueous solution of 4%. However, the Examiner has misinterpreted the disclosure of Yamamoto.

In particular, while the Applicants recognize that Yamamoto references PVA in an aqueous solution, Yamamoto merely references PVA in an aqueous solution with respect to the desired viscosity of the PVA, which is a function of its degree of polymerization and

saponification. Because viscosity of a polymer itself is difficult (or impossible) to measure, Yamamoto discloses a preferred viscosity of the PVA while in an aqueous solution. However, contrary to the Examiner's assertions, Yamamoto does not disclose that the PVA is incorporated into the composition as a 4% aqueous solution, or that the weight percentage of PVA recited in Yamamoto includes water. In fact, Yamamoto discloses that the opposite is true, i.e., that the 50 to 1,000 parts by weight of the PVA relates to PVA only and this range does not include water.

Specifically, paragraph [0075] of Yamamoto discloses that “[t]he amount of component (C) to be incorporated ranges from 50 to 1,000 parts by weight, preferably from 60 to 900 parts by weight, per 100 parts by weight of the organopolysiloxane (A). If the amount is below the aforesaid lower limit, sufficient oil repellency may not be provided to paper. If the amount is above the aforesaid upper limit, sufficient water repellency may not be provided.” Clearly, Yamamoto is referring to the PVA itself, because Yamamoto does not state that an aqueous solution of 4% PVA is included in an amount of from 50 to 1,000 parts by weight, but rather states that PVA itself is included in an amount of from 50 to 1,000 parts by weight. This is further evidenced by the fact that water is a separate and distinct component in the composition of Yamamoto. In particular, paragraph [0077] of Yamamoto discloses that water is included in an amount of from 100 to 100,000 parts by weight per 100 parts by weight of component (A). Yamamoto further discloses in this paragraph that if water is included in an amount less than this range, “it may be difficult to disperse the hydrophobic components, i.e., the components other than PVA resin (C) and surfactant (F).” Clearly, if the PVA were included as a 4% aqueous solution, there would not be concerns relative to its dispersion, because it would already be in solution at a low level.

While the Applicants appreciate that the Examples of Yamamoto include PVA resin in an aqueous solution, the Applicants note that these Examples further support the Applicants' position that Yamamoto requires 50 parts by weight of PVA resin itself, without regard to the amount of water that may be included along with the PVA resin. For example, Example 1 of Yamamoto discloses that a composition is formed with 200 parts of the aqueous PVA resin of Preparation Example 1. Notably, this aqueous PVA resin is a 10% aqueous solution. Accordingly, in Table 1 of Yamamoto, the PVA resin is listed as being included in the composition of Example 1 of Yamamoto in an amount of 20 parts by weight (which corresponds to 10% of 200, i.e., the amount of the PVA resin included in the 10% aqueous solution). The organopolysiloxane is present in this Example of Yamamoto merely in an amount of 10 parts by weight. As such, without regard to water, PVA resin is present in Example 1 of Yamamoto in an amount of 200 parts by weight when the amount of the organopolysiloxane is normalized to 100 parts by weight. The amount of the PVA resin included in Examples 1-7 of Yamamoto varies from 5 to 100 (prior to being normalized to 100 parts by weight of the organopolysiloxane), as set forth in Table 1 of Yamamoto. Notably, the amount of the organopolysiloxane included in these Examples of Yamamoto is static at 10 parts by weight. Accordingly, when this amount of the organopolysiloxane of the Examples of Yamamoto is normalized to 100 parts by weight, the corresponding amount of the PVA resin (without reference to water) ranges from 50 to 1,000. This is not surprising, considering Yamamoto discloses and claims PVA resin in this amount. In contrast, as described above, the independent claims of the subject application have been amended to recite that the water-soluble polymer is present in component (B<sup>1</sup>) or component (B<sup>2</sup>), respectively, in an amount of from 0.01 to 5 % by weight. Thus, even if 250 parts by

weight of the aqueous solution of a water soluble polymer is utilized, and 5% of the aqueous solution is the water soluble polymer, the water-soluble polymer itself (without including the water) is only present in the emulsion in an amount of 12.5 parts by weight, which is merely 25% of the amount required in Yamamoto.

Accordingly, contrary to the Examiner's assertion, not only does Yamamoto fail to disclose a water-soluble polymer in the amount recited in the currently amended independent claims of the subject application, but Yamamoto expressly teaches away from such an amount. In particular, as introduced above, Yamamoto expressly discloses that if PVA is present in an amount of less than 50 parts by weight, "sufficient oil repellency may not be provided to paper." Notably, "[a] reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant." *In re Gurley*, 27 F.3d 551, 553 (Fed.Cir.1994). As the Examiner is aware, "[a] prior art reference that 'teaches away' from the claimed invention is a significant factor to be considered in determining obviousness." MPEP § 2141.02. A teaching away of the claimed invention is a significant factor in determining obviousness even in view of *KSR Intern. Co. v. Teleflex Inc.*, 550 U.S. 398, 127 S.Ct. 1727 (2007). More specifically, the Court in *KSR* stated that "when the prior art teaches away from combining certain known elements, discovery of a successful means of combining them is more likely to be nonobvious." *Id.* at 1740 (citing *United States v. Adams*, 383 U.S. 39, 51-52 (1966)).

It is clear that Yamamoto requires PVA in an amount of at least 50 parts by weight based on 100 parts by weight of component (A). In contrast, the water-soluble polymer is present in component (B<sup>1</sup>) or component (B<sup>2</sup>), respectively, in an amount of from 0.01 to 5 % by weight.

Thus, as set forth above, even if 250 parts by weight of the aqueous solution of a water soluble polymer is utilized, and 5% of the aqueous solution is the water soluble polymer, the water-soluble polymer itself (without including the water) is only present in the emulsion in an amount of 12.5 parts by weight, which is merely 25% of the amount required in Yamamoto. As such, the Examiner's rejection over Yamamoto is respectfully overcome.

In view of the foregoing, the Applicants respectfully submit that claims 1-6, 8-15, 17, 18, and 20-23 are both novel and non-obvious over the prior art, including over Yamamoto. As such, the Applicants submit that the claims are in condition for allowance, and such allowance is respectfully requested.

This Amendment is submitted timely; thus, it is believed that no additional fees are due. However, if necessary, the Commissioner is authorized to charge Deposit Account No. 08-2789 in the name of Howard & Howard Attorneys PLLC for any additional fees or to credit the account for any overpayment.

Respectfully submitted,

**HOWARD & HOWARD ATTORNEYS PLLC**

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